



Continuous Air Monitoring of Mercury in Rochester, NY

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Observations, August – November, 2004

Mercury Monitoring Goals

- Characterize current baseline levels of ambient, speciated Hg in New York
- Evaluate future changes in anthropogenic emissions (e.g. Clean Air Mercury Rule)
- Augment current Hg monitoring in New York
- Potential source attribution in conjunction with local winds and air parcel back trajectories
- Deployed at DEC continuous air monitoring (CAM) site in Rochester

Tekran System

- Model 2537A Hg vapor analyzer

Model 1130 particulate Hg unit

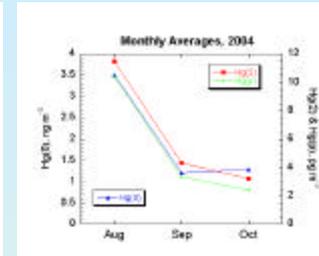
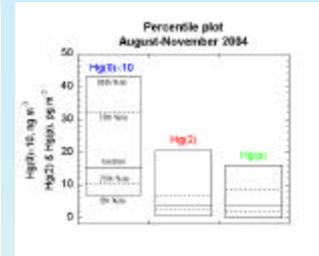
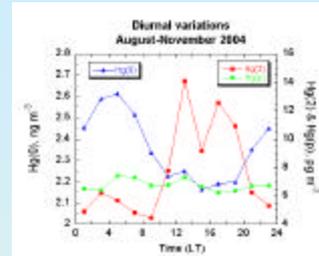


Model 2537A

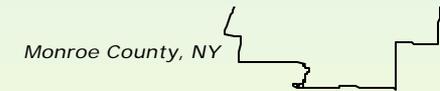
Model 1135 particulate unit (includes pyrolyzer and filter)



Model 1130 speciation unit with denuder module



High Hg(2) is moderately correlated with high SO₂, possibly indicating the effects of coal burning



Case Study: September 4, 2004

- Afternoon mercury concentrations were high: Hg(0) = 3.79 ng m⁻³, Hg(2) = 157 pg m⁻³, Hg(p) = 47.5 pg m⁻³; highest Hg(2) and Hg(p) during the measurement period
- Major coal burning sources located within ~15 km to the northwest of the Rochester CAM site
- Maximum hourly PM_{2.5} = 55 µg m⁻³, SO₂ = 35 ppb
- Surface winds shifted from west to northeast during the afternoon; possible re-circulation of polluted air?

Acknowledgments

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